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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,240	12/31/2003	Ryoichi Aoyama	OKI 395	6971
23995	7590	04/25/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005			NGUYEN, HUNG	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,240

Applicant(s)

AOYAMA ET AL.

Examiner

Hung Henry V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 7, 10-13, 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7, 10-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 7, 10-13, 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al (U.S.Pat. 6,268,904).

With respect to claims 1, 4, 7, 10-13 and 15-22, Mori et al (figures 7-9) discloses a self-cleaning transmittable plate (72) in a semiconductor exposure apparatus and corresponding method, comprising substantially all of the limitations set forth in the instant claim such as: a light source for emitting ultraviolet light for exposure (see col.33, lines 28-29); an optical system (11-19) for guiding ultraviolet light emitted from the light source to an exposure mask (20) on which a predetermined exposure pattern is formed, and a projection lens (21) for projecting the pattern formed on the mask onto a substrate (22), the self-cleaning transmittable plate is arranged at a position where the exposure mask (20) is to be disposed (see col.10, lines 60-64) to clean the projection lens (21) with the ultraviolet light, the self-cleaning transmittable plate (72) diffusing or converging ultraviolet light guided by the optical system (11-19) to irradiate the projection lens (21) with the ultraviolet light. Mori does not expressly disclose "the transmittable plate having a lens-shaped concave portion on one surface thereof and bracelet-shaped concave lenses concentrically arranged on the other surface thereof" as recited in the instant claims. However, Mori does suggest that "diffusion plate 72 may be, for example, a fused quartz or calcium

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fluoride plate having a pattern etched in on one of its surface, such as surface 72s. The pattern on surface 72s may be periodic, such as diffraction grating, to diffract light incident thereon or may be random to scatter light incident thereon” (see col.10, lines 64 thru col.11, line 4).

Furthermore, Mori suggests, “the present invention is constituted so that the lens surfaces of the projection lens 21 in the region greater than angle α and less than angle β are photo-cleaned by refracting light beam 222 by a photo cleaning optical member (for example, a convex lens or concave lens and the like” (see col.23, lines 66 thru col.24, line 4). Also, Mori teaches a concave transmittable plate (216) as a photo cleaning optical member. This provides a clear evidence that it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the shape of the self-cleaning transmittable plate to obtain the invention as specified in the instant claims. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ into the device of Mori a “transmittable plate having a lens-shaped concave portion on one surface thereof and bracelet-shaped concave lenses concentrically arranged on the other surface thereof” as specified in the instant claims so that the entire lens surface and the inner side of the projection optical system can be efficiently cleaned.

Response to Amendment/Argument

3. Applicant’s amendments filed April 4, 2005 have been entered. Claims 1, 4, 7, 10 have been amended. Claims 2-3, 5-6, 9 have been cancelled and new claims 11-22 have been added. Applicant’s arguments have been carefully considered in combination with the amendment but they are not found persuasive. In response to applicant’s arguments that there is absolutely no suggestion from Mori that the features of the optical member 216 can be combined with the

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diffusion plate 72 even though Mori show an optical member 216 which includes a concave portion. The Examiner respectfully disagrees with the applicant. The Applicant is reminded that the rejection here is made under 35 U.S.C. 103(a). Accordingly, there need not necessarily be a clear suggestion in the reference of Mori to replace the transmittable plate of Mori with the claimed transmittable plate. The issue here is whether one of ordinary skill in the art, in the possession of Mori would have modified the teachings of Mori to come up with applicant's invention. As clearly described in the reference of Mori, the transmittable plate (72) is placed on the optical path of the exposure device for diffusing ultraviolet light guided by the optical system and irradiating the projection lens. Based on the exposure conditions and the transmittance of the projection lens, in order to clean efficiently the projection lens, Mori further discloses performing photo-cleaning using a self-cleaning transmittable plate having a concave surface (216). The Examiner fails to find applicant's arguments convincing that the claimed invention would have been unobvious to a skilled artisan in view of the teachings of Mori. Moreover, it is noted that such a modification would have involved a mere change in the shape/or size of a component. A change in shape/or size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hvn
4/16/05



HENRY HUNG NGUYEN
PRIMARY EXAMINER